

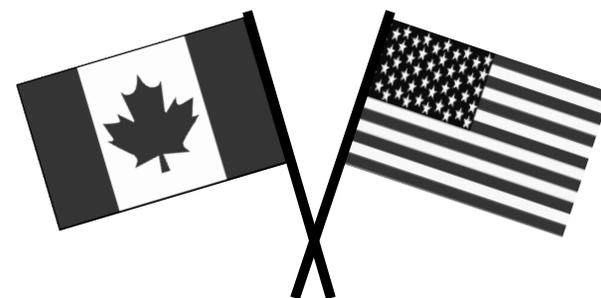


Any audio system can be a distraction to the rider and/or passenger. Please use caution when playing your stereo, especially in traffic.

www.hogtunes.com

HOGTUNES

Audio Solutions For The Great American Cruiser



**Designed and Engineered in Canada For
The Great American Cruiser**

Limited-RM

Installation Manual

**For Use On 2014+ (Non-CVO)
Liquid Cooled FLH Touring Bikes**

Version 1.0

Thank-you for choosing the Hogtunes Limited-RM Kit. Since positive word of mouth is the best way to grow our business, we want your new system to work as well as it was designed to. If you have any questions or concerns, we are here to help. Email info@hogtunes.com, or call us during regular business hours (EST) at (705)-719-6361. If you still need help, please consider a professional installation by your dealer.

This Kit Has The Amplifier Power the Front And Lower Speakers While The Radios Built In Amplifier Powers the Rear Speakers.

***This System is Designed To Work With Factory Radio Software.
NO DEALER RADIO SOFTWARE “REFLASHES” ARE REQUIRED!***

Getting Started:

Step #1: Remove the seat, and both wires (+ and -) from the battery.

Step #2: Remove the outer fairing/headlamp assembly. Refer to a service manual if you need help with this. Note: A towel on the front fender can help prevent scratches or “dings” from dropped tools or fasteners etc. Colorful expletives and flying wrenches will most likely also be kept to a minimum.

Rear Speakers:

Step #1: Remove the factory rear speaker grills by undoing the 4 screws on the front of the grills. Carefully lift up on each speaker and take the 2 wires off by pulling one at a time from the stock speaker. Remove the speakers.

Step #2: Locate the Hogtunes 362R-RM (rear speakers) that came in the kit. The female OE connectors mate with the male connectors on each speaker and only go on one way. Once you are confident the factory wires are correctly attached to the new speakers, set them in place, install the grills that came with the kit and secure the speaker by reinstalling the 4 screws per grill. It's a good idea to get all 4 grill screws “started” and then get each one snug. Gradually tighten each one down making sure all 4 screws holding the grill down are snug but secure!

Front Speakers:

Step #1: On the brake side speaker cabinet, carefully remove the cable going into the power port/cigarette lighter assembly. If your bike has the CB module (mounted “sideways” on the clutch side cabinet) undo the antenna cable and main harness. The CB Module will stay attached to the clutch side cabinet when removed. Undo the speaker wire plugs going into each cabinet (pink & pink with black stripe wires). Smaller harnesses are attached to the cabinets with “Christmas tree” fasteners, and are easy to pull off. Figure 1.1 and 1.2 (on next page) have arrows that point to the factory fasteners that will be removed to allow the cabinets to come out of the bike. Although the brake side is shown on next page, fastener locations are common for both brake and clutch side cabinets.

NOTE: We STRONGLY suggest completing the front speaker installation on one side of the bike and then moving to other side!

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Technical Specifications:

362F-RM Front and 362R-RM Rear Speakers

Power Handling:	125 RMS-200 Peak
Frequency Response:	55hz-25Khz
Sensitivity:	92 db 1watt/1meter
Nom. Impedance :	2 Ohms

NCA 450-RM Amplifier

Amp's RMS Power at 2Ω:	50 Watts x 4 Channels
Frequency Response:	40hz - 25khz
Fuse at Amp:	30 amp
Topology:	Class A/B

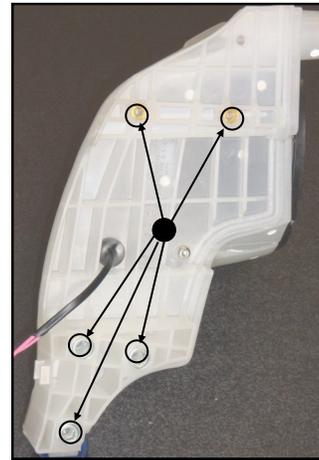


Figure 1.1 Side View of Brake side cabinet

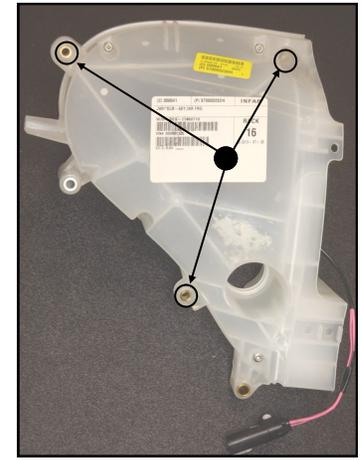


Figure 1.2 Back View of Brake side cabinet

Step #2: With the cabinet removed from bike undo the 4 screws that hold the factory speaker to the cabinet. Carefully take off each speaker wire by disconnecting one at a time. Take a Hogtunes 362F-RM (front) speaker and attach the factory speaker wires noting they will only go on one way ,and that the built in barbs will secure the factory connectors. Using the factory screws, attach the Hogtunes speaker to the cabinet noting that there is a locator “peg” on the cabinet and a hole in the speaker’s frame which need to line up. The factory speaker grill can be left in or replaced with the supplied metal mesh grill using the 3 factory screws on the inside of the fairing. On the Hogtunes grill, you will see two holes and one “keyhole” where the screws go through and into the fairing. The keyhole in the Hogtunes grill needs to be oriented so it is closest to the radio on each side for proper fitment. Please note that the Hogtunes mesh grills will allow the speakers to play louder than the factory cloth covered grills! With the grills in place and the speaker properly attached to the speaker cabinet, the cabinet can be re-installed.

Repeat Step #2 for the second cabinet. Don't re-attach the speaker connectors on the cabinets back to the bike yet. Make sure to plug the power cable back into the power port/cigarette lighter assembly on the brake side as well as reattaching the wire harnesses to the cabinets with the factory “Christmas Tree” fasteners. If your bike has the CB module, make sure to re-install the antenna cable and main harness.

Installing the Amplifier:

Step #1: Over top of the radio, pull up to release each wire harness from the black plate via the factory “Christmas Tree” fasteners. If your bike has factory GPS, the small square antenna will need to be relocated just behind the voltmeter as shown in Fig 1.1 below. Remove the 4 factory “Torx” screws that go through the top of the black plate and into the top of the radio. Set these screws aside for now.



Fig 1.1: The white circle shows the new location for GPS Antenna if your bike came equipped with this feature.

Step #3: The amplifier comes shipped pre-mounted to a silver mounting plate. Locate and remove the 4 screws (2 per side) that attach the amp to the silver plate. Put these screws just removed and the amplifier aside for now.

Sit the supplied silver plate (without amp) on top of the radio so its oriented as shown below. Locate and install one of the supplied “star” washers on each factory screw, and reinstall the screw & washer through the silver plate, through the factory black plate and into the top of the radio.



Fig 1.2: Amplifier and mounting plate correctly oriented. The plate with 4 small holes is for mounting a popular factory accessory. The white circle show tabs which are there for the factory “Christmas Tree” fasteners to re-secure the harnesses lifted earlier.

Warranty Information:

IMPORTANT: In the event of a warranty claim, please fill out the form in the Warranty section of our website, or contact us by email, or by phone. Valid claims will have an Return Authorization Number (RA#) generated which **MUST** appear on the outside of the box when it arrives to our offices.

Goods Arriving Without an RA# will be refused!

Please Record Your Amps Serial # Here _____

Hogtunes speakers are warranted for a period of 20 years. The NCA 450-RM Amplifier is warranted for 3 years from original purchase date. Proof of purchase is required for all warranty claims. The warranty applies to the original retail customer, and is not transferable. Please contact Hogtunes for all warranty claims. Products found to be defective during the warranty period will be repaired or replaced (with a product deemed to be equivalent) at Hogtunes sole discretion. Hogtunes complete warranty policy is available on our website at www.hogtunes.com/warranty.html

What Is Not Covered:

- 1) Any expense related to the removal or re-installation of Hogtunes products.
- 2) Repairs to these products performed by anyone other than Hogtunes.
- 3) Subsequent damage to any other components.
- 4) Any product purchased from a non-authorized Hogtunes dealer.
- 5) Damage to Hogtunes products due to an accident or collision.
- 6) Paint applied to any part, for any reason
- 7) Speaker frames (baskets) that are bent or broken
- 8) Speaker cones that are pierced or cut
- 9) Damage caused by overtightening, or not using supplied fasteners
- 10) Damage from use of “Thread Lock or Screw Glue” materials of any kind
- 11) Damage to inbound product due to improper packing.

Take the Hogtunes panel with the speaker and plug the speaker wires into the speaker noting they will only go on one way, and that barbs built into the speaker will lock the connectors in place. The rubber compression nuts are now placed into the openings on the front of the main panel and using the screws removed earlier, the speaker panel is attached to the main lower panel. The threads on the compression nuts are brass so please make sure the screws are snug but don't overtighten.

Repeat the steps to install the lower adaptor for the other side of the bike.

With the lowers complete, use the supplied zip ties to secure the lower wires to the crash bar.

At this point, all audio connections for this system are made. Attach the amps red wire to the positive (+) battery terminal, and the amps black wire to the negative (-) battery terminal. The factory battery wires are also re-installed at this point. When attaching the power and ground wires, it is always a good practice to do the positive first. When the final connector touches the battery, some sparking is normal. This is a function of the capacitors in the amplifier charging up. Turn the stereo on, and at low volume, test to make sure all 6 speakers are working. Make sure the radios fader control is adjusting the volume between the front 4, and 2 rear speakers. If not, make sure the "fader/no fader" switch is in the "no fader" position.

Re-install the seat.

This is the best time to take a few minutes to "clean up" any amplifier wiring using the supplied zip-ties.

Before re-installing outer fairing, turn front wheel to each extreme side making sure any wiring is not impeding the steering of the motorcycle.

Failure to do so can result in serious injury or death!

Re install the bikes fairing and your new system is ready to enjoy!

Step #4: On the side of the amp, you will see a "Fader/No Fader" Switch. For this system, make sure the switch is in the "No Fader" Position. When the installation is complete, if you adjust the radios fader, the fairing and lower speakers will be on the "front half" of the fader and the rears will be on the "rear half".

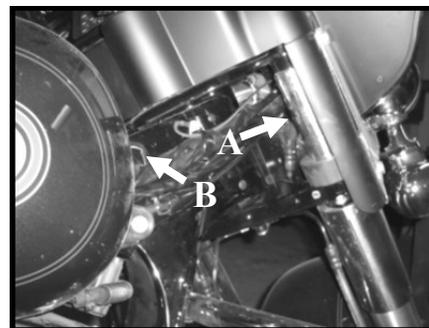
Step #5: Locate the main power harness and plug it into the matching "pig-tail" on the side of the amp. Locate the harness with blue/black and brown/black wires, and insert the 4 pin plug into the "front out" socket on the side of the amp. Locate the "LC Lower" wire harness and insert the matching plug into the "rear out" on the amp. Locate the harness with the green/black and yellow/black wires and install the rectangular 8 pin socket into "audio in" on the side of the amp.

Step #6: Sit the amp on top of the silver plate so when standing in front of the bike you can read the Hogtunes logo on top of the amp. Re-install the amp to the plate using the four screws removed earlier.

Step #7: Fig 1.2 (on previous page) has a white square which shows a smaller white 2 pin factory plug behind the bikes voltmeter. Locate the amps orange wire on the power harness and plug it directly into this factory harness. This is the amplifiers "turn on" lead and tells the amp to turn on/off with the bikes ignition. If you have a factory accessory already plugged into the factory connector, you will need to splice the amps orange wire in. This wire draws less than 0.5A when activated.

Step #8: The plug with the blue/black wires will install into the factory plug that goes directly into the brake side speaker cabinet. The plug with green/black wires will install into the factory connector that originally plugged directly into the brake side speaker cabinet. The plug with the brown/black wires will install into the factory plug that goes directly into the clutch side speaker cabinet. The plug with yellow/black wires will install into the factory connector that originally plugged directly into the clutch side speaker cabinet

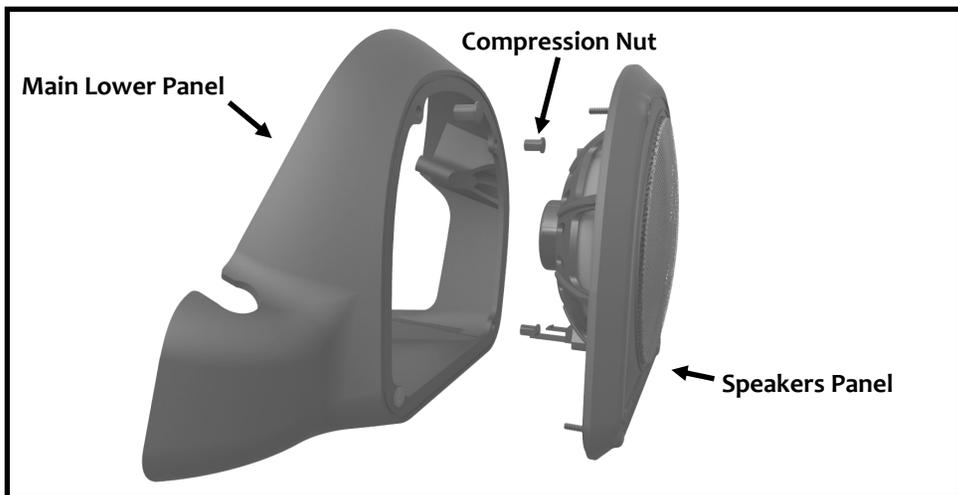
Step #9: The power/ground harness will pass together under the inner fairing where the main wire harness passes through on the brake side of the bike. Loosen the tanks "chrome console" and run wires up and over the gas tank, but under the tanks chrome console. There is a provision on the front of the tank console for wires to pass. Note: Although not necessary, the power and rear harnesses can go under the gas tank if you choose to remove and reinstall the tank. When correctly installed, the power and ground wires are the right length to connect to the battery, but please do not connect them yet.



Stock Harness and Amplifiers Harnesses Passing From Fairing To Just In Front Of Tank (Arrow A) . Cable Tying the Harnesses To The Main Bike Harness Just In Front Of The Tank (Arrow B) Allows The Amp Harnesses To Go Up Towards The Tanks Chrome Console Easier And Makes For a Cleaner Install.

Lower Speakers:

Step #1: On the speaker panel, you will see 4 black screws that need to be removed. These screws go into rubber compression nuts that hold the speakers panel to the main lower panel. These compression nuts will also come off and be put aside with the screws.



Step #2: Starting on the brake side lower fairing, use a coin or something similar to carefully pry off the front access cover. Look inside the lower opening and at the very back, you will see a 7/16" nut that is to be removed. This nut allows the painted fairing lower "cap" on the front to come off. With the painted cap off, you will see a bar that secures the top half of the lower to the crash bar. Remove the 2 nuts and the bar and put aside for now. At the bottom of the lower is a clamp that holds the bottom half of the lower to the crash bar. Remove the bolt that secures the clamp.

Step #3: Gently push the top of the lower towards the back of the bike just enough so you can remove the 3 torx screws (normally hidden by the painted cap) that hold the lower's factory front panel in place. Gently pull on the front panel to release 2 clips which will allow the front panel to come away, but not completely free from the bike yet. There is a small arm for the vent mechanism still attached that is removed by squeezing the top of the pivot pin and lifting up on the arm. You can now bring the factory lower front panel to a work bench and remove the torx screw that holds the vent adjuster and arm to the factory panel. Using the same screw, install the vent adjuster and arm into the Hogtunes main lower panel.



Step #4: The kit comes with die cut foam panels. Find the one for the side of the bike you are working on and apply as shown noting you should clean the area with isopropyl alcohol first.

Step #5: On the back of your factory front panel, you will see 2 white clips. One of these clips will come off and be installed onto the Hogtunes part as shown.

Step #6: Moving to the front side of the lower, in the area normally hidden by the painted cap, you will see a hole where the bolt passes through that secures the painted cap. Just above that hole and approximately 2" back from the bolt hole on the "top" of the lower, you will need to drill a 3/8" hole for the wires to pass. When this install is finished, the painted cap will hide the wire nicely. It's a good idea to start with a pilot hole and then drill the final size. Please use caution to make sure your drill bit does not pierce the coolant tank on the brake side!

Step #7: On the lower harness (plugged into the "rear out" on the amp) you will see the main harness (4 wires), and two 2 wire harnesses that need to be unplugged from the main (4 wire) harness. We have you separate these to help eliminate the extra plugs possibly scratching your bike while routing. The balance of the main wire harness will pass through where the power harness passed so it ends up on top of the crash bar as close to the center as you can (see image on bottom of page 5 for reference). Locate the 2 wire harness (just removed) marked brake side and plug it into the connector now on the crash bar. The other side of the brake side harness will go into the lower through the hole just drilled. It's easier to pass the larger of the 2 connectors first. Once the wires are in the lower, take up the slack along the crash bar keeping the main harness as close to the center of the crash bar as possible. The kit comes with strips of black gummy material. Take one of the strips and use it to seal the hole around the wire on the outside of the lower. With the wires secured and properly in place, reinstall the painted fairing cap.

Step #8: Take the Hogtunes front panel and while holding it close the lower, snap the arm for the vent back into place on the pivot pin first and then press the front panel onto the lower noting the one clip will snap in and hold the panel in place. Reinstall the 3 factory torx head screws (by hand just until they are snug) to secure the panel to the lower. The "bar" and 2 nuts removed earlier that secure the top of the lower to the crash bar will now be reinstalled. The bolt removed earlier that secures the lower to the bottom of the crash bar is also re installed.